



Status of Safety WG Products and Activities

November 18, 2008



Briefing Outline

- Safety Working Group (WG) Mission and Core Products
 - National Safety Management System (SMS) Standard
 - National Aviation Safety Information Analysis and Sharing (ASIAS) Concept
 - Safety Culture Improvement Resource Guide
 - National Aviation Safety Strategic Plan (NASSP)
- Safety Assessments
 - Lean Safety Assessments (LSA)
 - Operational Safety Assessments (OSA) – CDA example



Safety WG Mission / Core Products

NextGen Integrated Plan & Safety WG Products

	NextGen Integrated Plan (Dec '04) Safety Working Group Mission (Section 7.5)	Safety Working Group Products	Status
1	Create a national-level integrated safety management framework that addresses all facets of the air transportation system, building safety design assurances into operations and products	National Safety Management Standard	Endorsed by SPC July 2008
2	Establish an on-going, integrated operational data analysis capability to proactively identify and resolve safety concerns before incidents occur	Phase 2 Aviation Safety Information Analysis & Sharing Concept of Operations	Endorsed by Board October 2008; Seeking SPC Endorsement November 2008
3	Establish and track a safety improvement culture where safety and its continuous improvement are seen as the primary goals	Safety Culture Improvement Resource Guide	Published on JPDO Website August 2008
4	Lead and manage research efforts to determine national safety strategy	National Aviation Safety Strategic Plan (NASSP)	Seeking Board and SPC Approval December 2008



National SMS Standard – FY09 Plan

- SMS SME Study Team (ST), sponsored by the SPC through the Safety WG, facilitate/support implementation of SMS within NextGen Departments /Agencies
- Major Milestones/Timing/Duration
 - Q1: Validate SMS SME membership; establish/agree on charter
 - Q2: Establish requirements for implementation strategies within NextGen Departments /Agencies to assure alignment
 - Q3 & Q4:
 - Support development and alignment of NextGen Departments' / Agencies' implementation strategies
 - Begin to support, as requested, SMS implementation within NextGen Departments /Agencies
 - If necessary, update JPDO SMS Standard based on lessons learned



Aviation Safety Information Analysis and Sharing (ASIAS) Concept - Status

- Vision:

The Phase 2 ASIAS will be an integrated, operational capability to support aviation safety management systems, and proactively identify and evaluate safety issues through aggregation of data and sharing of analysis capabilities, based on trusted partnerships among Federal government agencies and industry stakeholders that volunteer to participate.

- Requested SPC Action (Nov 19)

- Endorse the Phase 2 ASIAS Concept
- Designate FAA as lead agency for Phase 2 ASIAS as recommended by the JPDO Board
- Support coordination amongst JPDO member agencies on research relevant to aviation safety data sharing and analysis

ASIAS Data Fusion

5. Weather
(DOC, DoD)

6. Traffic
Procedures
(FAA ATO)

3. Radar
Tracks
(FAA ATO)

1. Flight Data Terrain
Alerts (Industry)

4. Terrain
Database
(NASA)

2. Minimum
Vectoring
Altitude
(FAA ATO)



Aviation Safety Information Analysis and Sharing (ASIAS) Concept – FY09 Plan

- Definition/Description of Product/Activity
 - Develop a path for evolving existing ASIAS capabilities to include JPDO member agencies as described in the Phase 2 ConOps
 - Establish Phase 2 ASIAS Transition Committee
- Major Milestones/Timing/Duration
 - Q1: Identify transition requirements; identify agency resources; charter ASIAS Transition Committee
 - Q2: Draft ASIAS inter-agency MOU template; identify elements of governance model
 - Q3: Draft transition plan
 - Q4: Deliver transition plan to Safety WG



Safety Culture Improvement Resource Guide – FY09 Plan

- Continuous updates to an “ideal” safety culture and processes, procedures, and mechanisms to indoctrinate a safety culture across the U.S. Air Transportation System. Guide supports the Safety Working Group mission to establish a safety improvement culture where aviation safety, and its continuous improvement, are seen as the primary goals, and will be included as part of SMS Guidance to agencies.
- Major Milestones/Timing/Duration
 - Q1: Define Research Requirements, Domestic and International Safety Promotion Activities
 - Q2: Monitor Research Development, Domestic and International Safety Promotion Activities
 - Q3: Begin incorporating research findings, Domestic and International Safety Promotion Activities
 - Q4: Brochure and Website Development, Disseminate revised Safety Culture Improvement Resource Guide.



National Aviation Safety Strategic Plan (NASSP) - Status

- The NASSP:
 - Defines national goals, objectives, and strategies for aviation safety improvements
 - Provides the basis on which the JPDO member departments and agencies may plan their aviation safety resources and on which the OMB may align budgets relative to aviation safety
- Requested SPC Actions:
 - Endorse the National Aviation Safety Strategic Plan
 - Agree to subsequent use by agencies to plan aviation safety resources
- Current Status:
 - Agency vetting still underway; targeting Dec 3 Board endorsement
 - SPC Endorsement – target early Jan 2009

NASSP Goals & Objectives

GOAL 1: SAFER PRACTICES

Safety is assured by applying consistent safety management approaches; comprehensive safety information sharing, monitoring and analysis; and developing NextGen to have inherent safety

Provide consistent safety management approaches that are implemented throughout government and industry

Provide enhanced monitoring and safety analysis of the Air Transportation System (ATS)

Provide enhanced methods for ensuring safety is an inherent characteristic of NextGen

GOAL 2: SAFER SYSTEMS

Aviation system technologies are aimed at managing hazards, eliminating recurring accidents, and mitigating accident and incident consequences

Provide risk reducing systems interfaces

Provide safety enhancements for airborne systems

Provide safety enhancements for ground-based systems

GOAL 3: SAFER WORLDWIDE

System technologies, standards, regulations, and procedures are harmonized domestically and internationally to create an equivalent and improved level of safety across transportation system boundaries

Encourage development and implementation of safer practices and safer systems worldwide

Establish equivalent levels of safety across air transportation system boundaries



National Aviation Safety Strategic Plan (NASSP) – FY09 Plan

- Major Milestones/Timing/Duration
 - Q1: Deliver NASSP v1.0 to SPC for endorsement
 - Q2: Annual NASSP analysis/revision: Safety issues collection and database creation
 - Q3: Annual NASSP analysis/revision: NASSP evaluation
 - Q4: Annual NASSP analysis/revision: Edit NASSP (v2.0)
 - Q4: Deliver NASSP v2.0 to SPC for endorsement



Safety Assessments



Lean Safety Assessments

- Definition/Description of Product/Activity
 - Quick safety assessments of the proposed changes to the air transportation system, to identify main issues and focus resources for more in depth assessments.
- Major Milestones/Timing/Duration
 - Q1: Completion of the following LSAs:
 - Equivalent Visual Operations
 - Merging and Spacing
 - Q2: Completion of the following LSAs:
 - Reduced Separations
 - Delegated Responsibility for Separation [ATO-P]
 - Initial Conflict Resolution Advisories [ATO-P]
 - Integrated Arrival/Departure Air Space Management [ATO-P]
 - Time-Based Metering Using RNP and RNAV Route Assignments [ATO-P]
 - Ground-Based Augmentation System (GBAS) Precision Approaches [ATO-P]
 - Point-in-Space Metering [ATO-P]
- Customer: Concept WGs, Implementing agencies



Lean Safety Assessments (cont.)

- Description of Outcome/Product:
 - Quick assessments to identify main safety issues and to focus resources for more in depth safety assessments.
 - LSAs will be used by concept WGs and implementing agencies as input into their Safety Assessment process
 - Work will be sponsored by FAA ATO-P/Safety WG
- JPDO Resource Requirements (fed/industry/contractor):
 - Safety WG (government, industry, academia)
 - Contract support – Safety WG/ATO-P
 - Tech support from WGs (domain SMEs) and EAE division
- Dependencies
 - Inputs: Functional analysis of NextGen system; well defined capabilities/OIs; NextGen Enterprise Architecture and systems engineering information from EAE Division; accident and incident information from FAA ASIAs and other sources; access to domain SMEs
 - Outputs: Results of analyses feed Safety Assessments by WGs or implementing agencies



Continuous Descent Arrival (CDA) Operational Safety Assessment (OSA)

- Task: Develop a credible example of an Operational Safety Assessment for the other Working Groups to follow in performing OSAs per the policy proposed by the Safety Working Group
- CDA Analysis has not been validated
- Seeking input from other Working Groups to refine CDA assessment



Questions



Back Up

Department/Agency SMEs

Dept. / Agency	SMS	ASIAS	NASSP
DOC	Jim Kelley (NOAA)	Jim Kelley (NOAA)	Jim Kelley (NOAA)
DoD	Dave Harper (USAF) Scott Kubica (USA) Leslee McPherson (USN) John Seibert (DUSD-I&E)	Doug Weitzel (USAF) Scott Kubica (USA) CDR John Klemenc (USN)	Randy Rushworth (USAF) CDR John Klemenc (USN) John Seibert (DUSD-I&E)
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